

4. Applicants have amended the application to include data for related application to which the present application claims priority.

5. Applicants are preparing an amended sequence listing and will submit such listing under separate cover.

6. Applicants have amended the abstract in compliance with CFR 1.72(b).

7. Applicants note the objection to informalities with respect to the numbering of the drawings. Applicants will amend the drawings to incorporate the Examiner's suggestions upon submission of formal drawings.

8. Applicant has amended claim 18 and cancelled claim 21 obviating the objection based on typographical errors found in these claims.

9-10. Claims 18, 20 and 21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-129 of U.S. Patent No. 6,165,787. To expedite prosecution, Applicants have canceled claims 20 and 21 rendering rejection of these claims moot. Cancellation of these claims is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Amended claim 18 is still pending in the present application. Applicants will submit a terminal disclaimer, if necessary, upon indication of allowable subject matter.

11. Claims 18 and 20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-76 of U.S. Patent No. 6,140,120. To expedite prosecution, Applicants have canceled claim 20 rendering rejection of this claim moot. Cancellation of this claim is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Amended claim 18 is still pending in the present application. Applicants will submit a terminal disclaimer, if necessary, upon indication of allowable subject matter.

12. Claim 31 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,063,625. To expedite prosecution, Applicants have canceled claim 31 rendering the rejection moot. Cancellation of

the claim is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope.

13. Claims 1, 6 and 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-127 of U.S. Patent No. 6,046,047. To expedite prosecution, Applicants have canceled claims 1 and 6 rendering rejection of these claims moot. Cancellation of these claims is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Amended claim 14 is still pending in the present application. Applicants will submit a terminal disclaimer, if necessary, upon indication of allowable subject matter.

14. Claims 22 and 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 38 and 44 of U.S. Patent No. 6,043,082. Applicants will submit a terminal disclaimer, if necessary, upon indication of allowable subject matter.

15. Claim 31 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-70 of U.S. Patent No. 6,011,018. To expedite prosecution, Applicants have canceled claim 31 rendering the rejection moot. Cancellation of the claim is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope.

16. Claims 1, 6, 14, 18, 20 and 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-84, 86, 87, 106, 116 and 123-126 of U.S. Patent No. 5,869,337. To expedite prosecution, Applicants have cancelled claims 1, 6, and 20 rendering rejection of these claims moot. Cancellation of these claims is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Amended claims 14, 18 and 23 are still pending in the present application. Applicants will submit a terminal disclaimer, if necessary, upon indication of allowable subject matter.

17. Claims 1, 6, 14, 18, 20, 21, 31 and 37-39 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-79, 81-93, 96-117,

161-218, 224-229 and 233-235 of U.S. Patent No. 5,834,266. To expedite prosecution, Applicants have canceled claims 1, 6, 20, 21, 31 and 37-39 rendering rejection of these claims moot. Cancellation of these claims is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Amended claims 14 and 18 are still pending in the present application. Applicants will submit a terminal disclaimer, if necessary, upon indication of allowable subject matter.

18. Claim 31 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3, 14 and 34-127 of U.S. Patent No. 5,830,462. To expedite prosecution, Applicants have cancelled claim 31 rendering the rejection moot. Cancellation of the claim is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope.

19. Claim 18 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 44-54 of copending Application No. 09/582,916. Applicants will submit a terminal disclaimer, if necessary, upon indication of allowable subject matter.

20. Claims 1, 6 and 18 are rejected for allegedly failing to be patentably distinct from claims 4 and 10 of commonly assigned U.S. Patent No. 6,117,680. To expedite prosecution, Applicants have cancelled claims 1 and 6 rendering rejection of these claims moot. Cancellation of the claims is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Amended claim 18 is still pending in the present application. Applicants traverse the rejection to the extent that it is maintained over the claim as amended.

21. Claims 1, 6 and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4 and 10 of U.S. Patent No. 6,117,680. To expedite prosecution, Applicants have canceled claims 1 and 6 rendering rejection of these claims moot. Cancellation of the claims is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Amended claim 18 is still pending in the present application. Applicants will submit a terminal disclaimer, if necessary, upon indication of allowable subject matter.

22 Claim 45 is rejected under 35 U.S.C. 101 because the claimed invention is allegedly directed to non-statutory subject matter. To expedite prosecution, Applicants have canceled claim 45. Cancellation of claim 45 is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope.

23-24. Claim 45 is rejected under 35 U.S.C. 101 because the claimed invention allegedly lacks either a specific asserted utility or a well-established utility. Claim 45 is further rejected under 35 U.S.C. 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. To expedite prosecution, Applicants have canceled claim 45. Cancellation of claim 45 is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Reconsideration and withdrawal of the rejection is requested.

25-26. Claim 36 is rejected under 35 U.S.C. 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Amendment of the pending claims render this rejection moot. Cancellation of claim 36 is not in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Reconsideration and withdrawal of the rejection are requested.

27-28. Claim 1, 6, 14, 18, 20-23, 31, 36-39 and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for allegedly failing to point out and distinctly claim the subject matter which applicant regards as the invention. To expedite prosecution, Applicants have amended the claims to incorporate the Examiner's suggestions. Such amendments are not made in acquiescence of the rejection, and Applicants reserve the right to prosecute claims of similar or differing scope. Reconsideration and withdrawal of this rejection is requested.

a. Applicants' amendment of the phrases "capable of binding", "capable of initiating" and "capable of expressing" obviates this rejection.

- b. Applicants' amendment of the terms "containing" or "contain" obviates the rejection.
- c. Cancellation of claim 20 renders the rejection moot.

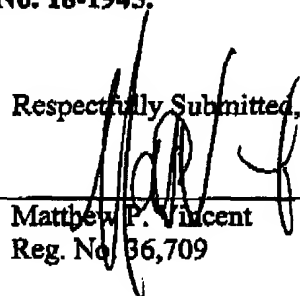
CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that the pending claims are in condition for allowance. Early and favorable reconsideration is respectfully solicited. The Examiner may address any questions raised by this submission to the undersigned at 617-951-7000. Should an extension of time be required, Applicants hereby petition for same and request that the extension fee and any other fee required for timely consideration of this submission be charged to Deposit Account No. 18-1945.

Respectfully Submitted,

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